

## U.S. Fire Administration / National Fire Academy

*Coffee Break Training***Topic: Fire Door Releasing Mechanisms**

**Learning Objective:** The student shall be able to identify the requirements for placing fire door releasing mechanisms.

Automatic releasing mechanisms for fire door assemblies and other opening protectives must be installed where they will be most effective to release the door as soon as possible.

Smoke detectors, heat detectors, fusible links, flame detectors, or other devices (or a combination) can be used to release fire door assemblies. Release devices also may be part of an overall system, such as a fire alarm, water flow alarm, or carbon dioxide release system that releases the door.

When smoke detectors are used, they should be located in accordance with NFPA 72, *National Fire Alarm Code*<sup>®</sup>. Wall-mounted detectors should be located between 4 and 12 inches (102 to 305 mm) below the ceiling, and ceiling-mounted detectors at least 4 inches (102 mm) from the nearest wall.

Detectors and their components should be installed in accordance with the manufacturers' instructions.

Unless otherwise acceptable to the code official, heat detectors or fusible links should be installed on both sides of the wall, connected to one another so that the operation of any single detector or fusible link causes the door to close. Where fusible links are used, one fusible link should be located near the top of the opening, and additional links shall be located at or near the ceiling on each side of the wall. NFPA 80, *Standard for Fire Doors and Other Opening Protectives*, provides diagrams to illustrate unusual or asymmetric wall, ceiling, and soffit configurations.

For additional information, refer to NFPA 80, Chapter 4; the *International Building Code*; or NFPA 5000, *Building Construction and Safety Code*<sup>®</sup>.

The smoke detector should be 4 to 12 inches (102 to 305 mm) below the ceiling, and the fusible links should be near the ceiling.

